

**R E M A R K S**

Claims 1-12, 20, 21, 35, 41, and 59-61 were examined. Claims 1, 2, 9-12, 20, 21, 35, 41 and 59-61 were rejected. Claims 3-8 were objected to.

The following claims are amended: 1, 3, 7, 9, 21 and 59.

The following claims are canceled without prejudice or disclaimer: claim 2 and withdrawn claims 17-19 and 56. Other withdrawn claims remain pending for possible rejoinder. Of these, claim 24 is being amended to change its dependency, in view of the cancellation of claim 2, from which it originally depended.

The amendments of claim 1, 7 and 9 are discussed in Section I below. Claims 3, 21 and 59 are amended primarily or exclusively to correct their dependencies.

Thus the currently pending claims are claims 1, 3-12, 20, 21, 23, 24, 26, 29, 34-36, 41, 42, 45-47, 49-53, and 59-61. **Of these, the active claims under examination are claims 1, 3-12, 20, 21, 35, 41, and 59-61.**

The undersigned discussed the Office Action briefly on the phone with Examiner Prouty on April 3, 2009, to verify that certain rejected claims (not only those objected to) would be allowable if the appropriate amendments were made that would put claims 3-8 into condition for allowance. The undersigned also indicated Applicants intention to amend claim 1 to its current narrow scope, and the Examiner indicated that such a claim would be considered.

None of the amended or new claims include new matter and their entry is respectfully requested. None of the amendments or cancellations raise new issues for search or examination, as the art has been thoroughly searched and cited, and all of the claims are of a scope that comports with the Examiner's manner of applying the prior art and her indication of allowability of claims 3-8.

**I. Potentially Allowable Claims that were Objected To**

Claims 3-8 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Applicants' Response**

As Applicants understand it, claim 3 was considered allowable because, in the Office's view of the cited prior art, there was no disclosure nor suggestion of a replacement PTS sequence in

human catalase, that included, in addition to a C-terminal PTS1 tripeptide (positions that are designated here as Xaa<sub>-3</sub>Xaa<sub>-2</sub>Xaa<sub>-1</sub>), a sequence with between about 5 and about 17 additional residues situated N-terminal to this tripeptide (*i.e.*, where n=5-17). The specification and original claims designated additional residues to the N-terminal side of the C-terminal tripeptide as being in positions Xaa<sub>-4</sub> for the first additional residue (n=1) to Xaa<sub>-20</sub> for the seventeenth additional residue (n=17).

It is Applicants' understanding that claim 2 was rejected because it recited that **n** could be between 1 and 17 additional amino acids, and that the Office considers a replacement sequence in which **n**=1 to fall within the scope of the first § 103 rejection.

However, Applicants see no basis nor suggestion in the Office's discussion or in the cited prior art for asserting that an embodiment in which n=2 or greater (up to n=17 as in prior claim 2), was known or would have been obvious. In their prior claim set, Applicants "jumped" from a claim that covered "**n** is about 1 to about 17" (claim 2) to a claim that covered "**n** is about 5 to about 17" (claim 3). However, it should be clear from the disclosure that Applicants intended to cover all intermediate ranges as well, *i.e.*, n=2, n=3, n=4. Support is found in the specification at page 10, lines 12-18 and page 11, lines 1-7.

Therefore, applicants have amended claim 1 to recite that, in addition to replacement of the human catalase wild-type KANL with the indicated C-terminal tripeptide options, an additional 2 to about 17 amino acids (N-terminal to that tripeptide sequence) are required. Applicants have removed "about" from the lower end of the range to avoid any ambiguity that **n** must be at least 2. A claim of this scope should be allowable for the same reason that a claim in which **n** is at least 3 or at least 4 or at least 5 (*i.e.*, the scope of claim 3) is allowable.

Accordingly, claim 2 has been cancelled, and later claim dependencies from claim 2 have been amended to be from claim 1 (or from later claims). Claim 3 now depends from amended and allowable claim 1 and would therefore be deemed allowable.

Claim 7 depended from claim 2, which has been canceled, but now depends from amended claim 1, which is believed to be allowable. In addition, some clarifying amendments have been made to claim 7. Applicants noticed that the language "at least 1, 2 or 3" meant, effectively, "at least 1". Claim 7 was therefore amended to refer to "at least 2" (in keeping with amended claim 1) and "at least 3"; for clarity, these embodiments were placed in separate clauses (i) and (ii). Applicants note that Xaa<sub>-6</sub> only exists if **n**=3 (or more) while Xaa<sub>-5</sub> exists if **n**=2 or 3 (or more). These amendments

are believed to clarify the meaning of claim 7. (This issue was also discussed briefly on the phone with the Examiner.)

Claim 9 is amended in several ways. First, Applicants noticed that its recitation of “negatively charged amino acid” was an inadvertent clerical error from the outset, because “positively charged” amino acids were intended. This is supported by the amino acid in that position in all sequences discussed in the specification, and further by the fact that several dependent claims are clearly directed to positively charged residues (Arg, Lys and His). In addition, the language “n is at least 1 and” is deleted as superfluous since parent claim 1 requires *n* to be at least 2, so that residue Xaa<sub>-4</sub> is present by definition.

Due to the amendments to various of the claims, in particular claim 1, all the remaining active claims are dependent from one or another allowable base claims, so this objection may properly be withdrawn from claims 3-8 and is not applicable to any of the other claims.

## II. Rejections Under 35 U.S.C. § 103(a): Obviousness

### A. First Obviousness Rejection (repeated)

Claims 1-2, 9-12, 35, 41, and 59 were rejected as being obvious over Sheikh *et al.* (“Sheikh”) in view of Trelease *et al.* (“Trelease”) for reasons explained in the first Action. The basis for these rejections and the Examiner’s response to Applicants’ arguments need not be reiterated here.

#### Applicants’ Response

While Applicants do not agree with this rejection for at least the reasons set forth in the prior paper, they have amended claim 1 and canceled claim 2 and changed dependencies accordingly in other claims to advance prosecution “after final.” As a result, the scope of the pending claims are now free of the cited art. It would therefore be proper to withdraw this ground for rejection.

### B. Second Obviousness Rejection (Repeated)

Claims 20 and 21 continued to be rejected as obvious over Sheikh and Trelease as applied to claims 1-6, 9-12, 35, 41, 58, and 59 and further in view of a third reference, Fujiwara *et al.* (“Fujiwara”) for reasons given in the first Action. The basis for these rejections and the Examiner’s response to Applicants’ prior arguments need not be reiterated here.

**Applicants' Response**

While Applicants do not agree with this rejection for at least the reasons given earlier, they have amended claim 1 and canceled claim 2 to advance prosecution. As a result, claims 20 and 21 are now free of the cited art. It would therefore be proper to withdraw this ground for rejection.

**C. Third (New) Obviousness Rejection**

Claims 60 and 61 were rejected as being obvious over Sheikh in view of Trelease and Fujiwara as applied to claims 1-2, 9-12, 20, 21, 35, 41, 58, and 59 above, and further in view of three newly cited references: Horowitz *et al.* (US Pat.5,824,469), Bower *et al.* (US Pat. 6,057,136), and Fraser *et al.* (US Pat. 6,057,136).

**Applicants' Response**

Applicants most emphatically disagree with this ground for rejection for at least the reasons advanced earlier as concerns Sheikh, Trelease and Fujiwara. However, in view of the amendment of claim 1, from which claims 60 and 61 depend, the latter claims are free of the cited art. It would therefore be proper to withdraw this ground for rejection.

**III. CONCLUSION**

Applicants respectfully request that the amendments and remarks be entered into the record. The pending active claims are in condition for allowance and Applicants earnestly urge such allowance.

Respectfully submitted,

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